

05-07-02

Re: 09/792,474

Examiner Colilla,

Attached are the results of my search on ultraviolet or heat sensitive inks applied by "hand". The only application I could find was for UV ink applied with a "squeegee." I searched the foreign patent and nonpatent commercial databases.

Please let me know if you have any questions or need further assistance or explanation.

Thanks,



Anne Hendrickson  
EIC2800  
308-6559  
CP4-9C18

2/9/4 (Item 1 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
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013733744

WPI Acc No: 2001-217974/200122

XRAM Acc No: C01-065000

Formation of simulated deep acid etch sign, by applying coating to substrate, e.g., clear or color transparent ink on specified mesh screen, and curing ink on outer areas and then all the way through in ultraviolet curing unit

Patent Assignee: COLLINS G E (COLL-I)

Inventor: COLLINS G E

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6200648	B1	20010313	US 98161365	A	19980928	200122 B

Priority Applications (No Type Date): US 98161365 A 19980928

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6200648	B1	4	C08J-007/04	

Abstract (Basic): US 6200648 B1

NOVELTY - A simulated deep acid etch sign is formed by applying a coating to a substrate, e.g., a clear or color transparent ink on a at least 140 mesh screen; and curing the ink first on the outer areas and then all the way through in an ultraviolet curing unit.

DETAILED DESCRIPTION - Formation of a simulated deep acid etch sign includes creating a custom image on the sign through computer programming and hand-applied manipulation; applying a coating to a substrate, e.g., a clear or color transparent ink on a at least 140 mesh screen; running the coated substrate through an ultra-violet (UV) curing unit and curing the ink first on the outer areas and then all the way through to give it a crinkled look; and post curing the sign and providing a conventional mirroring process.

USE - For forming a simulated deep acid etch sign.

ADVANTAGE - The formed simulated deep acid etch sign creates the impact and effect provided by conventional deep acid etching without having to be deep acid etched. The sign has a very high quality and a very reasonable cost.

pp; 4 DwgNo 0/0

Technology Focus:

TECHNOLOGY FOCUS - IMAGING AND COMMUNICATION - Preferred Method:

The applying step is done with a transparent yellow UV ink through a 140 mesh screen and with a 70 durometer squeegee. The running step is done by running the coated substrate through a UV curing unit using two 200 W lamps on a belt having a speed of approximately 25 ft/min, or using a 300 W lamp on a belt having a belt speed of 28 ft/min, or using a 350 W lamp on a belt having a speed of approximately 45 ft/min. The post curing step is done for 5-20 minutes. A film positive is shot on a 140 mesh monofilament polyester screen fabric using a conventional diazo photopolymer direct emulsion. A transparent yellow lacquer ink is printed on top of the cured UV ink through a 140 mesh screen, and the sign is cured in a batch oven at approximately 150 degrees F for one hour. The method also includes screen decorating with other inks, e.g., enamels, epoxies, or lacquers.

Title Terms: FORMATION; SIMULATE; DEEP; ACID; ETCH; SIGN; APPLY; COATING; SUBSTRATE; CLEAR; TRANSPARENT; INK; SPECIFIED; MESH; SCREEN; CURE; INK;

OUTER; AREA; WAY; THROUGH; ULTRAVIOLET; CURE; UNIT  
Derwent Class: A97; L01  
International Patent Class (Main): C08J-007/04  
File Segment: CPI  
Manual Codes (CPI/A-N): A99-A; L01-G05; L01-L01

? t s8/3,ae,k/1

8/3,AE,K/1 (Item 1 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
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01254555

System and method for applying a luminescent material to a **substrate**  
System und Verfahren um lumineszenten Beschichtungsmaterial auf ein  
Substrat zu legen  
Systeme et methode pour l'application d'un materiau luminescent sur un  
substrat

PATENT ASSIGNEE:

IOMEGA CORPORATION, (482102), 1821 West 4000 South, Roy, UT 84067, (US),  
(Applicant designated States: all)

INVENTOR:

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LEGAL REPRESENTATIVE:

Cabinet Hirsch (101611), 34, Rue de Bassano, 75008 Paris, (FR)

PATENT (CC, No, Kind, Date): EP 1083006 A2 010314 (Basic)

APPLICATION (CC, No, Date): EP 402438 000905;

PRIORITY (CC, No, Date): US 390728 990907

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: B05D-005/06; G11B-033/10

ABSTRACT EP 1083006 A2

A system and method for applying a thick layer of luminescent emissive material, such as phosphor, to a substrate, such as, a data storage cartridge, is provided whereby a luminescent emissive material is mixed with a binder, the mixture is dispensed onto a mesh screen placed over a substrate, and the mixture is then pushed through the mesh screen and applied to the substrate at a predetermined thickness. The predetermined thickness of the deposited phosphor layer is preferably between about 8 and 12 mils.

ABSTRACT WORD COUNT: 85

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200111	610
SPEC A	(English)	200111	1802
Total word count - document A			2412
Total word count - document B			0
Total word count - documents A + B			2412

System and method for applying a luminescent material to a **substrate**

...SPECIFICATION from the substrate. The mixture 5 is pushed through the mesh screen 4 using a **squeegee** 6 , where the mixture 5 is trapped and applied to the substrate 3 at a...

...a luminescent phosphor, such as an aggregate particle phosphor. The binder 2 preferably comprises an **ultra-violet** curing **ink carrier**, although any conventional viscous carrier such as paint or ink can be used. The...

...to 60 mils). The mixture 5 is pushed through the mesh screen 4 by a **squeegee** 6 where the mixture 5 is trapped and applied to the substrate 3 at a...

...CLAIMS said mixture is continuously dispensed;  
a substrate to which said mixture is applied; and  
a **squeegee** used to push said mixture through said mesh screen to  
apply a layer of said...

...to form a mixture;  
a mesh screen onto which said mixture is continuously dispensed;  
a **squeegee** which is used to push said mixture through said mesh  
screen and  
apply a layer...

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Set	Items	Description
S1	27	(ULTRAVIOLET OR UV OR ULTRA()VIOLET) () (INK OR INKS) (3N) H- AND?
S2	113	(ULTRAVIOLET OR UV OR ULTRA()VIOLET) () (INK OR INKS) AND HA- ND?
S3	467745	KLAF? OR SCROLL? OR PARCHMENT? OR DOCUMENT? OR SKIN? OR PA- PER? OR SUBSTRATE? OR SHEEPSKIN? OR ANIMAL(2N)SKIN?
S4	3961	(ULTRAVIOLET? OR ULTRA()VIOLET? OR UV OR HEAT()SENSTIVE) (- 2N) (INK OR INKS)
S5	1405	S3 AND S4
S6	73	S5 AND HAND?
S7	626	S3/TI,DE AND S4
S8	30	S7 AND (SILKSCREEN? OR SILK()SCREEN? OR SQUEEGE?)
S9	1572	S4/DE, TI
S10	74	S9 AND HAND?
S11	185	S4 AND HAND?
S12	17	S5 AND (HAND OR HANDWRITTEN OR WRITTEN OR WRITE OR SCRIBE? OR INSCRIBE?)
S13	0	S7 AND SQUEEGE
S14	2	S4 (3N) (HAND OR HANDWRITTEN OR WRITTEN OR WRITE OR SCRIBE? OR INSCRIBE?)

? show files

File 31:World Surface Coatings Abs 1976-2002/Apr  
(c) 2002 Paint Research Assn.  
File 248:PIRA 1975-2002May W1  
(c) 2002 Pira International  
File 240:PAPERCHEM 1967-2002/Apr W2  
(c) 2002 IPST

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Set	Items	Description
S1	0	(ULTRAVIOLET OR UV OR ULTRA()VIOLET) () (INK OR INKS) (3N) H- AND?
S2	114	(ULTRAVIOLET OR UV OR ULTRA()VIOLET) () (INK OR INKS) AND HA- ND?
S3	638920	KLAF? OR SCROLL? OR PARCHMENT? OR DOCUMENT? OR SKIN? OR PA- PER? OR SUBSTRATE? OR SHEEPSKIN? OR ANIMAL(2N)SKIN?
S4	1035	(ULTRAVIOLET? OR ULTRA()VIOLET? OR UV OR HEAT()SENSTIVE) (- 2N) (INK OR INKS)
S5	908	S3 AND S4
S6	414	S5 AND HAND?
S7	63	S3/TI,DE AND S4
S8	5	S7 AND (SILKSCREEN? OR SILK()SCREEN? OR SQUEEGE?)
S9	21	S4/DE,TI
S10	8	S9 AND HAND?
S11	464	S4 AND HAND?

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File 348:EUROPEAN PATENTS 1978-2002/APR W04

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File 349:PCT FULLTEXT 1983-2002/UB=20020502,UT=20020425

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Set	Items	Description
S1	1	(ULTRAVIOLET OR UV OR ULTRA()VIOLET) () (INK OR INKS) (3N) H- AND?
S2	3	(ULTRAVIOLET OR UV OR ULTRA()VIOLET) () (INK OR INKS) AND HA- ND?
S3	6084075	KLAF? OR SCROLL? OR PARCHMENT? OR DOCUMENT? OR SKIN? OR PA- PER? OR SUBSTRATE? OR SHEEPSKIN? OR ANIMAL(2N)SKIN?
S4	597	(ULTRAVIOLET? OR ULTRA()VIOLET? OR UV OR HEAT()SENSTIVE) (- 2N) (INK OR INKS)
S5	181	S3 AND S4
S6	5	S5 AND HAND?
S7	105	S3/TI,DE AND S4
S8	7	S7 AND (SILKSCREEN? OR SILK()SCREEN? OR SQUEEGE?)
S9	370	S4/DE, TI
S10	5	S9 AND HAND?
S11	18	S4 AND HAND?
S12	13	S11 NOT S10

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File	2:INSPEC 1969-2002/May W1	(c) 2002 Institution of Electrical Engineers
File	6:NTIS 1964-2002/May W2	(c) 2002 NTIS, Intl Cpyrgh All Rights Res
File	8:Ei Compendex(R) 1970-2002/May W1	(c) 2002 Engineering Info. Inc.
File	34:SciSearch(R) Cited Ref Sci 1990-2002/May W1	(c) 2002 Inst for Sci Info
File	434:SciSearch(R) Cited Ref Sci 1974-1989/Dec	(c) 1998 Inst for Sci Info
File	35:Dissertation Abs Online 1861-2002/Apr	(c) 2002 ProQuest Info&Learning
File	65:Inside Conferences 1993-2002/Apr W4	(c) 2002 BLDSC all rts. reserv.
File	77:Conference Papers Index 1973-2002/Mar	(c) 2002 Cambridge Sci Abs
File	94:JICST-EPlus 1985-2002/Mar W3	(c) 2002 Japan Science and Tech Corp(JST)
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File	144:Pascal 1973-2002/May W1	(c) 2002 INIST/CNRS
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File	305:Analytical Abstracts 1980-2002/Apr W1	(c) 2002 Royal Soc Chemistry
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Set	Items	Description
S1	0	(ULTRAVIOLET OR UV OR ULTRA()VIOLET) () (INK OR INKS) (3N) H- AND?
S2	6	(ULTRAVIOLET OR UV OR ULTRA()VIOLET) () (INK OR INKS) AND HA- ND?
S3	1569792	KLAF? OR SCROLL? OR PARCHMENT? OR DOCUMENT? OR SKIN? OR PA- PER? OR SUBSTRATE? OR SHEEPSKIN? OR ANIMAL(2N)SKIN?
S4	1906	(ULTRAVIOLET? OR ULTRA()VIOLET? OR UV OR HEAT()SENSTIVE) (- 2N) (INK OR INKS)
S5	556	S3 AND S4
S6	16	S5 AND HAND?
S7	191	S3/TI,DE AND S4
S8	8	S7 AND (SILKSCREEN? OR SILK()SCREEN? OR SQUEEGE?)
S9	607	S4/DE,TI
S10	3	S9 AND HAND?
S11	32	S4 AND HAND?

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File 344:CHINESE PATENTS ABS APR 1985-2002/MAR  
(c) 2002 EUROPEAN PATENT OFFICE  
File 347:JAPIO Oct/1976-2001/Dec(Updated 020503)  
(c) 2002 JPO & JAPIO  
File 350:Derwent WPIX 1963-2001/UD,UM &UP=200228  
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File 371:French Patents 1961-2002/BOPI 200209  
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(FILE 'HOME' ENTERED AT 11:15:55 ON 07 MAY 2002)

FILE 'HCAPLUS' ENTERED AT 11:16:15 ON 07 MAY 2002

L1           0 S (ULTRAVIOLET OR UV OR ULTRA()VIOLET)()(INK OR INKS) (3N) HAND  
L2           1 S (ULTRAVIOLET OR UV OR ULTRA()VIOLET)()(INK OR INKS) AND HAND?  
L3       1543265 S KLAFF? OR SCROLL? OR PARCHMENT? OR DOCUMENT? OR SKIN? OR PAPER  
L4       1644 S (ULTRAVIOLET? OR ULTRA()VIOLET? OR UV OR HEAT()SENSTIVE) (2N)  
L5       493 S L3 AND L4  
L6       6 S L5 AND HAND?  
L7       100 S L3/TI, ID AND L4  
L8       0 S L7 AND (SILKSCREEN? OR SILK()SCREEN? OR SQUEEGE?)  
L9       319 S L4/TI, ID  
L10       6 S L9 AND HAND?  
L11       17 S L4 AND HAND?  
L12       0 S L4 (3N) (HAND OR HANDWRITTEN OR WRITE? OR WRITTEN OR INSCRIBE  
L13       4 S L5 AND (HAND OR HANDWRITTEN OR WRITE? OR WRITTEN OR INSCRIBE?

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Set	Items	Description
S1	27	(ULTRAVIOLET OR UV OR ULTRA()VIOLET) () (INK OR INKS) (3N) H- AND?
S2	558	(ULTRAVIOLET OR UV OR ULTRA()VIOLET) () (INK OR INKS) AND HA- ND?
S3	5495405	KLAF? OR SCROLL? OR PARCHMENT? OR DOCUMENT? OR SKIN? OR PA- PER? OR SUBSTRATE? OR SHEEPSKIN? OR ANIMAL(2N) SKIN?
S4	3287	(ULTRAVIOLET? OR ULTRA()VIOLET? OR UV OR HEAT()SENSTIVE) (- 2N) (INK OR INKS)
S5	1919	S3 AND S4
S6	905	S5 AND HAND?
S7	503	S3/TI, DE AND S4
S8	102	S7 AND (SILKSCREEN? OR SILK()SCREEN? OR SQUEEGE?)
S9	577	S4/DE, TI
S10	128	S9 AND HAND?
S11	1125	S4 AND HAND?
S12	47	S10 AND (HAND OR WRITTEN OR WRITE OR HANDWRITTEN OR SCRIBE? OR INSCRIBE?)
S13	26	RD (unique items)
S14	84	S7 AND (HAND OR WRITTEN OR WRITE OR HANDWRITTEN OR SCRIBE? OR INSCRIBE?)
S15	49	RD (unique items)

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